Daily Diary Report by Bid Item

Contract No.: **04-0120F4**
Diary #: **516** **Const Calendar Day:** 904 **Date:** **29-Feb-2012** **Wednesday**
Inspector Name: **Bruce, Matt** **Title:** **Transportation Engineer**
Inspection Type: Intermittent
Shift Hours: 04:30 am 03:00 pm **Break:** 00:30 **Over Time:** 02:00
Federal ID:
Location:
Reviewer: **Schmitt, Alex** **Approved Date:** **Status:** Submit

04-0120F4
04-SF-80-13.2/13.9
Self-Anchored
Suspension Bridge

Weather

Temperature **7 AM** 40 - 50 **12 PM** 40 - 50 **4PM** 40 - 50
Precipitation 0.32" **Condition** Rain to cloudy with high winds

Working Day ☐ If no, explain:

Diary: Dispute ☐

Work description.

- Phil Latasa, Sami Dauok, Alex Schmitt, Daryoush Bahar, and myself checked the out to out distance for the cable strands today as Daryoush's and my measurements are tabulated below. Daryoush and I were responsible for both the north/south sidespans today. Similarly Sami and Phil were responsible for checking the north/south mainspans. Daryoush assisted me with the measurements and tabulating the data as I took all of the measurements unless otherwise noted. I used the Maletic gauge (#1) to take the out to out measurements of the cable strands.

All measurements by both crews were reported to Alex who was stationed in the Caltrans Connex recording and analyzing the data. When all of the measurements were completed, Alex was responsible for reviewing the measurements with ABF engineer Zach Lauria. See Alex's diary for more details related to the acceptance or rejection of cable strand sag adjustment.

Ambient temperatures were taken with the red temperature gauge. Wind speeds were obtained from weather.com at the time of the measurements. The steel temperature measurements were taken with the digital thermometer placed on the outer cable strand wires.

The official sunrise time per weather.com for San Francisco today was at 6:42am. The following measurements were taken of the relative sag from cable strand number 1 at the given times below:

- Daryoush and myself went up to the surveyed midpoint on the south sidespan to measure the prescribed cable strands at 4:51am. First we determined that it was unsafe to be on the catwalks at this time. The wind direction and speed at this time was SW @ 27mph. As expected the cable strands were undergoing dramatic oscillations and a valid measurement couldn't be obtained. We then went to the west-loop to take measurements and come back to this location if/and when the weather conditions improve.

// South West-Loop //
Time = 5:06am
Ambient Temperature = 47.2F
Condition = Rain
Wind = SW @ 27mph
ABF Engineer(s) or Surveyor(s) = None at this time
Caltrans Engineer(s) = Matt Bruce and Daryoush Bahar

Cable Strand (mm)	Steel Temperature (F)	O-O (#1Y) CT (mm)	Theor (mm)	CT Delta
1	47.7	Baseline or Zero	80	0

66	47.5	291 (-121) = 170	174	- 4
67	47.5	385 (-121) = 264	269	- 5
68	47.3	484 (-121) = 363	363	0

Comments: All cable strands were considered to be free-hanging at the time of measurement on the south west-loop. Daryoush took the measurement at this location. I recorded the data while the measurement was being taken.The ( ) denotes the fixed timber block (by ABF) to cable strand number 1 dimension in millimeters.

// North West-Loop //
Time = 5:18am
Ambient Temperature = 47.2F
Condition = Rain
Wind = SW @ 27mph
ABF Engineer(s) or Surveyor(s) = None at this time
Caltrans Engineer(s) = Matt Bruce and Daryoush Bahar

Cable Strand (mm)	Steel Temperature (F)	O-O (#1Y) CT (mm)	Theor (mm)	CT Delta
1	47.5	Baseline or Zero	80	0
66	46.8	293 (-126) = 167	174	- 7
67	47.7	397 (-126) = 271	269	+ 2
68	47.7	499 (-126) = 373	363	+ 10

Comments: All cable strands were considered to be free-hanging at the time of measurement on the north west-loop. Daryoush took the measurement at this location. I recorded the data while the measurement was being taken.The ( ) denotes the fixed timber block (by ABF) to cable strand number 1 dimension in millimeters.

- When the measurements were completed at or around 5:30am myself and Daryoush then proceeded to assess the conditions and possibly obtain measurements at the south sidespan given the weather conditions.

// South Sidespan //
Time = 5:37am
Ambient Temperature = 47.2F
Condition = Cloudy
Wind = W @ 18mph
ABF Surveyor(s) = None at this time
Caltrans Engineer(s) = Matt Bruce and Daryoush Bahar

Cable Strand	Steel Temperature (F)	O-O (#1) CT (mm)	Theor (mm)	CT Delta (mm)
1	46.5	Baseline or Zero	78	0
63	46.3	759, 757 - Ave = 758 (-61) = 697	686	+ 11
64	46.4	751, 747 - Ave = 749	753	- 4
66	46.5	327 (-13) = 314	286	+ 28
67	46.5	357 (-10) = 347	353	- 6
68	46.5	423 (-10) = 413	420	- 7

Comments: All cable strands were considered to be free-hanging at the time of measurement on the south sidespan. I took all of the measurements while Daryoush assisted me with setting up the targets, being level, normal to cable, etc. A timber block was used on cable strand number 1 to obtain the measurements for cable strand number 63 where the dimension is in ( ) millimeters. The Maletic gauge (#1) had to be inverted to measure cable strand numbers 66, 67, and 68. The target was placed on cable strand number

one and the flat plate was placed on the strand measured. The negative value in ( ) denotes the gradation on the target where the measurement was made since other strands were blocking the line of sight for a zero reading.

// North Sidespan //
Time = 6:10am
Ambient Temperature = 47.2F
Condition = Cloudy
Wind = W @ 12mph
ABF Surveyor(s) = None at this time
Caltrans Engineer(s) = Matt Bruce and Daryoush Bahar

Cable Strand	Steel Temperature (F)	O-O (#1) CT (mm)	Theor (mm)	CT Delta (mm)
1	46.8	Baseline or Zero	78	0
27	46.7	-8 from CS #1	-	- 8
63	46.5	684	680	+ 4
64	46.5	734	745	- 11
65	46.5	242 (-8) = 234	230	+ 4
66	46.5	372 (-8) = 364	294	+ 70
67	46.6	425 (-8) = 417	359	+ 58
68	46.3	466 (-8) = 458	424	+ 34

Comments: All cable strands were considered to be free-hanging at the time of measurement on the north sidespan. I took all of the measurements while Daryoush assisted me with setting up the targets, being level, normal to cable, etc. Cable strand number 27 was used as a reference strand for measuring the out to out distance for strands 65, 66, 67, and 68. The measurement for cable strand numbers 63 and 64 was done from the north side of the cable on this span referencing strand one. The line of sight was not blocked for these two strands by other strands.

- All of the prescribed measurements were completed at 6:30am and conveyed to Alex.

- Continued to process all of the surveying data gathered last week for the Hinge K Tie-Down temporary counterweight placed on the end of the W-Line YBITS bridge cantilever. Began formalizing a report which would be sent to the personnel involved in the Hinge K construction.

- Continued to write diaries for the last couple days.

- Completed filing out all of the outstanding information on the daily cable strand sag adjustment sheets for the past few days.